

DERWENT-ACC-NO: 1997-273929

DERWENT-WEEK: 199725

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TITLE: Modular, highly-loaded, high
efficiency waste water
treatment plant - removes
solids from channel sections
using band filters, followed
by ultraviolet irradiation
and by ion exchangers to
remove nitrate and salts

PATENT-ASSIGNEE: KAAS P[KAASI]

PRIORITY-DATA: 1997DE-2004175 (March 7, 1997)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE
LANGUAGE		MAIN-IPC
DE 29704175 U1		May 15, 1997
N/A	020	C02F 009/00

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR
APPL-NO	APPL-DATE
DE 29704175U1	N/A
1997DE-2004175	March 7, 1997

INT-CL (IPC): C02F001/32, C02F001/42 ,
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ABSTRACTED-PUB-NO: DE 29704175U

BASIC-ABSTRACT:

Plant for purifying water is claimed in which particulate and/or dissolved materials are removed by precipitation.

The novelty is that a main through-flow channel is provided for the water, which is divided into sections, in which are arranged a number of endless band filters (15-20) for successive extraction. In the channel behind the filters, there are one or more UV (ultra-violet) irradiation sections for photochemical treatment.

Preferably, after the UV sections, ion exchange sections are provided to remove nitrate and salts.

USE - A compact plant for waste water purification.

This plant avoids use of conventional gravity separation tanks. Salt removal (ion exchange) renders the water fit for e.g. watering urban parks.

ADVANTAGE - The plant aims at economical construction, especially through compactness. Treatment is rapid, expressly avoiding secondary reactions, and allowing larger quantities to be processed. The band filters quickly remove the solids, treatment being completed by the UV and ion exchange sections. Further chemical additions may be made to assist sedimentation and mechanical extraction. The number of sections may be increased as necessary, depending on the water quality. According to the wavelength of the UV light, microorganisms are killed, nitrites and ammonia are converted to nitrate, ozone is produced, broken down or converted into OH radicals, and

hydrogen peroxide is generated.

CHOSEN-DRAWING: Dwg.1/5

TITLE-TERMS: MODULE HIGH LOAD HIGH EFFICIENCY WASTE
WATER TREAT PLANT REMOVE

SOLID CHANNEL SECTION BAND FILTER
FOLLOW ULTRAVIOLET IRRADIATE ION
EXCHANGE REMOVE NITRATE SALT

DERWENT-CLASS: D15 X25

CPI-CODES: D04-A01E; D04-A01G; D04-A01P; D04-A02;

EPI-CODES: X25-H03;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1740P; 1887U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1997-088241

Non-CPI Secondary Accession Numbers: N1997-226859